WHAT IS CLAIMED IS:

1. A method for transporting a fine powder, comprising:

placing the fine powder into a hopper having an opening therein;

vibrating a vibratable element within the fine powder in the vicinity of the opening; and

capturing at least a portion of the fine powder exiting the opening within a chamber, wherein the captured powder is sufficiently uncompacted so that it may be dispersed upon removal from the chamber.

2. A method as in claim 1, wherein the vibratable element is vibrated in an up and down motion relative to the powder in the hopper.

3. A method as in claim 2, wherein the vibratable element is coupled to an ultrasonic horn, and wherein the vibrating step comprises actuating the ultrasonic horn.

4. A method as in claim 1, wherein the vibratable element is vibrated at a frequency in the range from about 1,000 Hz to about 180,000 Hz.

5. A method as in claim 1, wherein the vibratable element has a distal end which is placed near the opening, and wherein the distal end has an end-member attached thereto which is vibrated over the chamber.

6. A method as in claim 1, wherein the end-member is vertically spaced apart from the chamber by a distance in the range from about 0.01 mm to about 10 mm.

7. A method as in claim 1, further comprising moving the element across the opening while vibrating the element.

6 8. A method as in claim 5, further comprising translating the element along the opening at a rate that is less than about 100 cm/s.

8 9. A method as in claim 7, further comprising periodically levelling the powder within the hopper.

9 10. A method as in claim 8, wherein the levelling step comprises placing a projecting member on the vibratable element at a location spaced apart from a distal end of the vibratable element.

10 11. A method as in claim 1, wherein multiple chambers are aligned with the opening, and further comprising moving the vibratable element along the opening to pass over each chamber.

11 12. A method as in claim 1, wherein the fine powder comprises a medicament composed of individual particles having a mean size in the range from about 1 μm to 100 μm.

12 13. A method as in claim 1, wherein the capturing step further comprises drawing air through the chamber which is positioned below the opening, wherein the drawn air assists in drawing the fine powder into the chamber.

13 14. A method as in claim 1, further comprising transferring the captured powder from the chamber to a receptacle.

14 15. A method as in claim 13, wherein the transferring step comprises introducing a compressed gas into the chamber to expel the captured powder into the receptacle.

15 16. A method as in claim 1, further comprising adjusting the amount of captured powder to be a unit dosage amount.

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17. A method as in claim 16, wherein the adjusting step comprises providing a thin plate below the hopper, with the plate having an aperture that is aligned with the chamber, and further comprising moving the chamber relative to the plate to scrape the excess powder from the chamber.

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18. A method as in claim 1, wherein the hopper is a primary hopper, and wherein the placing step comprises transferring the powder from a secondary hopper to the primary hopper.

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19. A method as in claim 18, further comprising vibrating the secondary hopper to transfer the powder to the primary hopper.

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20. A method as in claim 1, further comprising dispensing the powder from the chamber and changing the size of the chamber.

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21. Apparatus for transporting a fine powder, comprising:

a hopper having an opening therein, the hopper being adapted to receive the fine powder;

at least one chamber which is movable to allow the chamber to be placed in close proximity to the opening;

a vibratable member having a proximal end and a distal end, the vibratable member being positionable within the hopper such that the distal end is near the opening; and

a vibrator motor to vibrate the vibratable member when within the fine powder.

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22. An apparatus as in claim 19, further comprising a mechanism for translating the vibratable member over the chamber.

23. An apparatus as in claim 20, further comprising a rotatable member having a plurality of chambers about its

periphery which are alignable with the opening, and wherein the translating mechanism is configured to translate the vibratable member along the opening so that the vibratable member passes over each chamber.

24. An apparatus as in claim 21, wherein the translating mechanism comprises a linear drive mechanism which translates the vibratable member along the opening at a rate that is less than about 100 cm/s.

25. An apparatus as in claim 21, wherein the vibrator motor vibrates the vibratable member at a frequency in the range from about 1,000 Hz to about 180,000 Hz.

26. An apparatus as in claim 21, wherein the vibrator comprises an ultrasonic horn which vibrates the element in an up and down motion relative to the powder.

27. An apparatus as in claim 26, wherein the vibratable element is cylindrical in geometry and has a diameter in the range from about 1.0 mm to about 10 mm.

28. An apparatus as in claim 27, further comprising an end member at the distal end of the vibratable member.

29. An apparatus as in claim 28, wherein the end member radially extends from the vibratable element.

30. An apparatus as in claim 28, further comprising a powder levelling member spaced above the end member.

31. An apparatus as in claim 21, wherein the chamber is disposed within a rotatable member which is placed in a first position having the chamber aligned with the opening, and a second position having the chamber aligned with a receptacle.

32. An apparatus as in claim 21, further comprising a port in the bottom of the chamber, and a vacuum source in communication with the port to assist in drawing the fine powder from the hopper and into the chamber.

33. An apparatus as in claim 32, further comprising a filter disposed across the port.

34. An apparatus as in claim 34, further comprising a source of compressed gas in communication with the port to eject the captured powder from the chamber and into the receptacle.

35. An apparatus an in claim 31, further comprising a controller for controlling actuation of the gas source and the vacuum source.

36. An apparatus as in claim 31, further comprising a plurality of hoppers disposed above a plurality of rotatable members which each include a plurality of chambers, and further comprising a plurality of elements and a plurality of vibrators to vibrate the elements.

37. An apparatus as in claim 20, further comprising a plate disposed below the hopper, with the plate having an aperture that is aligned with the chamber, and wherein the chamber is movable relative to the plate to allow excess powder to be scraped from the chamber.

38. An apparatus as in claim 20, wherein the hopper is a primary hopper and further comprising a secondary hopper disposed above the primary hopper to transfer powder to the primary hopper.

39. An apparatus as in claim 37, further comprising a shaking mechanism to vibrate the secondary hopper.

~~40.~~ 31 An apparatus as in claim ~~31,~~ 29 wherein the chamber is formed in a change tool, and wherein the change tool is removably coupled to the rotatable member.

~~41.~~ 39 A system for transporting a fine powder, comprising:

a plurality of rotatable members each having a row of chambers about their periphery;

a hopper disposed above each rotatable member, wherein each hopper includes an opening;

a vibratable element that is positionable within each of the hoppers, wherein each vibratable element has a distal end near the opening;

a vibrator coupled to each vibratable element to vibrate the elements in an up and down motion; and

a mechanism to translate each vibratable element along each of the hoppers while the elements are vibrating.

~~42.~~ 40 A system as in claim ~~41,~~ 39 further comprising a controller to control rotation of the vibratable members, the vibrators, and the translation mechanism.